

various embodiments with various modifications as are suited to the particular use contemplated.

[0115] The flowchart and block diagrams in the figures illustrate the architecture, functionality, and operation of possible implementations of systems, methods and computer program products according to various embodiments of the present invention. In this regard, each block in the flowchart or block diagrams may represent a module, segment, or portion of code, which comprises one or more executable instructions for implementing the specified logical function(s). It should also be noted that, in some alternative implementations, the functions noted in the block may occur out of the order noted in the figures. For example, two blocks shown in succession may, in fact, be executed substantially concurrently, or the blocks may sometimes be executed in the reverse order, depending upon the functionality involved. It will also be noted that each block of the block diagrams and/or flowchart illustration, and combinations of blocks in the block diagrams and/or flowchart illustration, can be implemented by special purpose hardware-based systems that perform the specified functions or acts, or combinations of special purpose hardware and computer instructions.

1. A system for remote care of an animal comprising:
 - a robotic animal caregiver including:
 - a housing;
 - a wireless data communication system disposed within the housing and wirelessly communicatively coupled with an external data communications system; and
 - a microprocessor in communication with the wireless data communication system disposed within the housing; and
 - a smart collar to be worn by the animal operable to determine a geo-location and behavior information of the animal and communicate with the microprocessor.
2. The system of claim 1, further comprising a mobility portion coupled to the housing and operable to move the housing controlled by the microprocessor.
3. The system of claim 1, further comprising a separate, remote central computer wirelessly communicatively coupled to the microprocessor.
4. The system of claim 2, further comprising a separate, remote central computer wirelessly communicatively coupled to the microprocessor.
5. The system of claim 2, wherein the smart collar is operable to transmit the geo-location and behavior information of the animal to the microprocessor, the microprocessor is operable to determine that the animal has defecated at a deposit location in response to analyzing the geo-location and behavior information of the animal, and the microprocessor being operable to instruct the mobility portion to navigate the housing to the deposit location to collect feces deposited by the animal.
6. (canceled)
7. The system of claim 4, wherein the smart collar is operable to transmit the geo-location and behavior information of the animal to the microprocessor, the microprocessor is operable to determine that the animal has defecated at a deposit location in response to analyzing the geo-location and behavior information of the animal, and the microprocessor being operable to instruct the mobility portion to navigate the housing to the deposit location to collect feces deposited by the animal.

8. The system of claim 5, wherein the microprocessor is operable to instruct the mobility portion to navigate the housing in a predetermined pattern in response to its location being in close proximity to the deposit location to collect feces deposited by the animal.

9. The system of claim 5, further comprising a video imaging system operable to generate video data, and the microprocessor being operable to receive and analyze the video data of the certain location and surroundings to aid in navigating the housing to the deposit location to collect feces deposited by the animal.

10. The system of claim 5, further comprising a video imaging system operable to generate video data, the microprocessor being operable to receive and analyze the video data of the animal to identify defecating behavior of the animal and confirm the geo-location of a deposit location.

11. The system of claim 5, wherein the microprocessor is operable to instruct the mobility portion to navigate the housing to the deposit location to pre-treat feces deposited by the animal to aid later collection.

12. The system of claim 2, further comprising a video imaging system operable to generate video data of a survey area, the microprocessor being operable to receive and analyze the video data and generate a map of the survey area and identifying a plurality of deposit locations within the survey area, the microprocessor being operable to instruct the mobility portion to navigate the housing to the plurality of deposit locations within the survey area according to the map to aid in navigating the housing to the deposit locations to collect feces deposited by the animal.

13. The system of claim 12, wherein the microprocessor is operable to transmit the map of the survey area identifying the plurality of deposit locations to a central computer, and receive a command from the central computer to initiate a feces collection sequence to collect the feces at the plurality of deposit locations.

14. The system of claim 2, wherein the smart collar is operable to transmit the geo-location and behavior information of the animal to the microprocessor, the microprocessor is operable to determine that the animal has defecated at a deposit location in response to analyzing the geo-location and behavior information of the animal, and the microprocessor is further operable to instruct the mobility portion to navigate the housing to the certain deposit location to pre-treat and collect feces deposited by the animal.

15. The system of claim 2, comprising a plurality of smart collars to be worn by a plurality of animals, the plurality of smart collars being operable to determine geo-locations and behavior information of the plurality of animals and transmit the geo-location information and behavior information with a unique identifier associated with the specific smart collar to the microprocessor, the microprocessor being operable to determine that one or more animals have defecated at deposit locations in response to analyzing the geo-location information and behavior information of the plurality of animals.

16. The system of claim 15, wherein the central computer is operable to keep a count of the number of feces collected from each animal, and generate a billing/fine statement in response to the count.

17. The system of claim 15, wherein the central computer is operable to instruct at least one robotic animal caregiver to collect the feces, perform DNA analysis, and transmit DNA analysis results to a central computer, and the central